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New England District
Engineering Planning Division
696 Virginia Road
Concord, Massachusetts
01742-2751

TECHNICAL REVIEW COMMENTS

Project Name: Atlantic City Naval Air Station FUDS CO2NJ0977-02
Location: Egg Harbor Township, NJ
Document Name: Draft Final Site Investigation Report, Area W Site Investigation (December 2011)
Date: February 2012
Comments Prepared by: U.S. Fish and Wildlife Service Responses Prepared by: USACE/Weston

No.	Ref. Page / Para.	COMMENTS	Disposition
Reviewer: Clay Stern, USFWS			
1.	NA	In the US Fish and Wildlife Service's role with the EPA Region 2 BTAG, I reviewed the Draft Final Area W Site Investigation Report for the Atlantic City Naval Air Station FUDS, prepared by Weston Solutions, Inc., and dated December 2011. Generally the report appears to be sufficiently comprehensive to support its conclusions. The Service has no objections or other comments to tender. We are interested in reviewing future documents related to the Atlantic City Naval Air Station FUDS.	Comment noted.

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No.	Ref. Page / Para.	COMMENTS	Disposition
Reviewer: Lora Smith, USEPA			
1.	NA	While it does not appear that site-related contamination is present at Area W, I would like to make the following comments with regard to data collection at future areas within FAA:	N/A
a.	NA	All data should be provided whether or not contaminants were detected.	All data were provided in Appendix G as noted in Section 3.2, first paragraph.
b.	NA	Soil sample depths were 0-0.5' and 0.5' above the water table, which in some cases was 15-20' below the ground surface. The EPA evaluates human health risk in the top 2' for most direct contact pathways and down to 10' for construction/utility worker direct contact pathways.	Comment noted. Only the soil samples collected to a depth of 10' below ground surface will be evaluated in the context of human health risk.
c.	NA	For statistical analysis of samples, it is recommended that a minimum of 8-10 samples be collected. While this effort did not warrant a statistical analysis of the data, if it had, it would have been beneficial to have collected enough samples.	Comment noted. If sufficient contamination was detected in Phase I to warrant additional sampling, Phase II samples would have been sufficient to provide appropriate sample numbers for statistical analysis.
d.	NA	While the background samples appear to have been collected in areas not impacted by known site activities, a better description of the areas would have been beneficial.	Additional description of background areas will be provided.
e.	NA	Residential wells should not be used to determine the nature and extent of contamination since well construction is uncertain. However, this information is valuable in evaluating exposure from potable water to individual residences.	Comment noted. Well depth (and additional information including well construction, if available) will be provided in Table 4-1.

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f.	NA	Confirm with EPA which screening levels should be used in the work plan. This did not have much impact on the conclusions of the current report. For example, more recent EPA RSLs should have been used (Nov. 2011). EPA also requests that soil RSLs for residential/industrial soil be used to screen sediment and EPA RSLs for tapwater be used to screen groundwater. When screening against the EPA NRWQC, use the more conservative of the aquatic life and human health values	The data will be compared against the November 2011 RSLs (please note that no values have changed but that arsenic was listed incorrectly and will be fixed). Soil RSLs for residential/industrial soil will be used to screen sediment and RSLs for tap water will be used to screen groundwater. The EPA NRWQC screening values will be incorporated into the screening values and we will confirm that the most conservative of the aquatic life and human health were used in this screening.

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g.	NA	Some detection limits were above screening/background levels (e.g., selenium in surface water). Please ensure that screening levels can be met by the subcontracted laboratory.	Many of the compounds with detection limits exceeding screening levels were noted in the approved Work Plan (Table 3-1). The majority of the rest of these exceedances were due to matrix issues (i.e., elevated moisture content) with one or more samples that increased detection levels above projected levels. Due to the most conservative approach of screening against the strictest applicable criteria, the analytical detection limits for a number of compounds are tested. It should be noted that additional methods (i.e., SVOC SIM analysis) were included in attempts to meet all screening criteria. All efforts will continue to ensure that screening levels can be met by subcontracted laboratories.
h.	NA	For chromium, EPA screens against the more conservative chromium (VI) screening levels unless speciation has been performed.	The chromium screening number will be revised.

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No.	Ref. Page / Para.	COMMENTS	Disposition
Reviewer: Lynn E. Vogel, PG, CHMM, Case Manager			
1.	Section 1.1, Page 1-1	The SIR states "The South Branch of Absecon Creek is located approximately 400 feet northeast of the site." Please clarify if this refers only to the "channelized SBAC" or if it includes the former meanders as well.	The text will be revised to indicate that the channelized portion of the SBAC is approximately 400 feet to the northeast of the site, and that a small meander of the SBAC is located approximately 300 feet to the northeast of the site.
2.	Section 2.2 Sampling Procedures, Page 2-3 and Table 2-1	The SIR states "Table 2-1 lists the analytical methods by media..." Table 2-1 references that all media were analyzed for Total Mercury only, however the SIR suggests that methyl mercury or low level mercury analysis was also performed on select media. Table 2-1 should be revised to accurately reflect the analytical methodologies for each media. USACOE shall clarify if there is a difference between methyl mercury and low level mercury analyses as both are referenced. USACOE shall clarify if additional sample precautions ("clean sampling") are required for low level mercury sample collection.	Table 2-1 will be revised to include the analysis of methyl mercury and low level mercury. Mercury was analyzed by two separate methods for aqueous samples (7470A and 1631) and solid samples (7471A and 1631 Modified). Section 2.2 will also be revised to include the “clean sampling” procedures utilized for collection of samples for low-level mercury analysis.

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3.	Section 2.2.1 Soil Samples, Page 2-3	The SIR states "Surficial soil samples were collected…with 4-inch bucket augers." USACOE shall clarify if surficial soil samples for VOCs analysis were collected using the bucket augers. The SIR also states "The remaining soil was homogenized in a disposable aluminum pan using a disposable plastic trowel." The Department notes that both these sampling methodologies are not appropriate according to the Department's August 2005 Field Sampling Procedures Manual (FSPM).	Section 2.2.1 will be revised to indicate that VOC sample fraction was collected utilizing Encore samplers directly from the undisturbed surface soil sample prior to the bucket auger collection and homogenization of the remainder of the soil sample, as is appropriate to not impact potential VOCs within the soil. Section 2.2.5 and Table 2-9 will be revised to address the deviation from NJDEP-approved soil sampling methodology (use of disposable aluminum pan and disposable plastic trowel). We acknowledge that there could be a correlation based on the aluminum and SVOC detections in soil samples. However, results from the equipment blanks from this equipment did not detect any compounds. Furthermore, elevated aluminum and the noted SVOCs are within documented regional background concentrations as discussed in the text. Section 4.2.1 will be revised to address this issue.

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4.	Section 2.2.3 Surface Water Samples, Page 2-6 and Figure 3-4	The SIR states, "Surface water samples were collected from various locations within the SBAC"; however no other specific information was provided. Figure 3-4 suggests that at least one sample was collected from a former meander and another from a drainage ditch. USACOE shall revise the SIR to include additional information on the SBAC surface water sample locations (i.e. channelized/former meander/drainage ditch, shallow/deep channel, slow/fast flowing water, depth of water column/sample, location relative to shore, gravelly/silty bottom etc.).	Correct, location SW-003 was collected in a meander of SBAC and location SW-002 was collected in a ditch draining from the area surrounding Building 170. Section 2.2.3 will be revised to provide additional location specific information about the surface water sampling locations as suggested. In addition, the view shown in Figure 2-1 will be expanded to show more of the drainage ditch.
5.	Section 2.2.3 Surface Water Samples, Page 2-6	The SIR states, "All surface water samples were collected using a peristaltic pump and Teflon lined polyethylene tubing." The Department notes that sampling for VOCs and SVOCs using a peristaltic pump is not appropriate according to the Department's FSPM.	The text is incorrect as stated. The unfiltered surface water samples were collected directly from the surface of the water body. Section 2.2.3 will be revised to accurately describe this.
6.	Section 2.2.5 Deviations from Workplan, Page 2-7 and Table 2-9	Table 2-9 should also include deviations from appropriate sampling techniques as referenced above.	Table 2-9 will be revised to include deviations from NJDEP-approved sampling techniques per comment #3 above.
7.	Section 2.4.1 Human Health, Page 2-10	The SIR states,"...all site soil and groundwater data were compared to EPA RSLs (November, 2010 update)." As noted in The Department's November 16, 2010 comment letter, soil and groundwater shall also be compared to the New Jersey Groundwater Quality Standards (GWQS) and Soil Remediation Standards (SRS).	Section 2.4.1 will be revised to indicate that soil and groundwater sample results were also compared to New Jersey Groundwater Quality Standards (GWQS) and Soil Remediation Standards (SRS) as requested (see Tables 3-1 and 3-2).

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8.	Section 2.4.2 Ecological, Page 2-10	The SIR states, "...all site soil, surface water and sediment data were compared to the lowest ecological benchmarks listed below." As noted in the Departments November 16, 2010 comment letter, soil, surface water and sediment data shall also be compared to Ecological Screen Criteria (ESLs).	Section 2.4.1 will be revised to indicate that soil, surface water and sediment data were also be compared to NJDEP Ecological Screening Criteria (ESLs) as requested (see Tables 3-3, 3-4, and 5-1).
9.	Section 3.2 Analytical Results, Page 3-2	The SIR states, "A list of compounds that were not detected at concentrations above applicable criteria is found in Appendix I." USACOE shall clarify if this table includes a list of contaminants where the laboratory Method Detection Limit (MDL) exceeds the applicable screening criteria, and is this was an issue for all samples. USACOE shall clarify if additional sampling is proposed for the affected samples.	Section 3.2 will be revised to indicate that the compounds listed in Appendix I includes compounds where the laboratory MDL exceeded the lowest applicable screening criteria. Table 3-1 of the QAPP identified a number of compounds that were expected to have detection limits that exceeded the lowest criteria. The remainder of the compounds that were measured with detection limits exceeding criteria were due to matrix issues (i.e., elevated moisture) within one or more samples that elevated detection limits. Based on the highly conservative approach of screening against the strictest available criteria, non-detection of compounds at all sample locations at these low levels does not suggest contamination.

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10.	Section 3.2.1 Soil, Page 3-3, and Table 3-1	The SIR indicates that the soil analytical results were compared to the strictest of the Department's NRDCSRS, RDCSRS, and IGWSRS and to the EPAs RSLs. However, a complete list of all these standards is not included in the SIR or appendices. The SIR should be revised to include a comprehensive list of the soil standards, highlighting the "strictest" to which the comparison was made.	An additional table presenting a complete listing of the standards used, as well as the "strictest" value used for comparison, will be added to the SIR.
11.	Section 3.2.1 Soil, Page 3-3 and Table 3-1, Appendix G and Figure 3-1	The SIR shall be revised to include all exceedances, including vanadium. The SIR states, "These concentrations were below the EPA soil criteria, and in the case of aluminum, below the maximum concentration measured at the background location." This statement should be revised as several soil samples had aluminum concentrations above the "maximum background concentration". In addition, Table 3-1 includes "maximum background concentrations" for only select contaminants. However, Appendix G, which includes the whole data set, does not reference "maximum background concentrations." The Department wonders therefore if the comparison to "maximum background concentrations" was completed for the whole data set. Appendix G shall be revised to include the "maximum background concentrations" for all contaminants.	The USEPA RSL soil criteria for vanadium listed in the SRI (5.5 mg/kg) is incorrect. Based on most current direction by USEPA for soil screening, the current lowest RSL soil screening criteria for vanadium is 390. The lowest NJDEP soil criterion is 78. As such there are no vanadium exceedances at Area W. That is correct; the site data was only compared to maximum background concentrations for compounds that were detected above screening criteria. The Appendix G tables will, however, be revised to include the maximum detected background concentrations.
12.	Section 3.2.2 Groundwater, Page 3-3, Table 3-2 and Appendix G	Table 3-2 includes "maximum background concentrations" for only select contaminants. However, Appendix G does not reference "maximum background concentrations." As noted above, Appendix G shall be revised to include the "maximum background concentrations" for all contaminants.	Maximum detected background concentrations will be added to the Appendix G tables.

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13.	Table 3-2 and Appendix G - Table G-2	Tables 3-2 indicates that groundwater samples were analyzed for "mercury (low level)"; however this data is not included the Table G-2 in Appendix G. Appendix G shall be revised to include all data. The Department also finds that not all of the GWQS (i.e. toluene, tetrachloroethylene, etc.) are correctly referenced in Table G-2. Appendix G (and associated text) should be revised to include the appropriate GWQS.	Mercury (low level) results have been included in Table G-2 in Appendix G. All tables will be reviewed to ensure GWQS (PQLs) are correctly referenced. Per response to comment #10 above, additional tables (2-10 through 2-16) presenting a complete listing of the standards used, as well as the "strictest" value used for comparison, have been added to the SIR.
14.	Section 3.2.2.2 Metals, Page 3-3	The SIR states, "Of those, all but arsenic and lead were detected in the background groundwater samples." A review of Appendix G indicates arsenic was detected in both background groundwater samples. The SIR should be revised accordingly.	Section 3.2.2.3 will be revised to describe that arsenic was also detected in background samples.
15.	Section 3.2.3 Surface Water, Page 3-4 and Appendix G	The SIR states, "Table 3-3 presents the comparison of surface water sample analytical results to...the NJDEP Surface Water Quality Criteria for Toxic Substances (SWQC) (lowest of human health, chronic and acute values). However, a comprehensive list of these criteria are not included in the SIR. The SIR shall be revised to include a comprehensive list of all ecological criteria.	Per response to comment #10 above, an additional table presenting a complete listing of the standards used, as well as the "strictest" value used for comparison, will be added to the SIR.
16.	Section 3.2.3 Surface Water, Page 3-4, Page 3-3, Table 3-3 and Appendix G	Table 3-3 includes "maximum background concentrations" for only select contaminants. However, Appendix G does not reference "maximum background concentrations." As noted above, Appendix G shall be revised to include the "maximum background concentrations" for all contaminants. The SIR states that surface water exceedances are on Figure 3-3, though they are on Figure 3-4. The SIR shall be revised accordingly.	Maximum detected background concentrations will be added to the Appendix G tables. Figures 3-3 and 3-4 will be switched to accurately reflect the data presented.

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17.	Table 3-3 and Appendix G - Table G-4	Table G-4 shall be revised to include missing Footnote No.3. The Department also notes that not all of the applicable surface water quality criteria (i.e. chronic or acute) are referenced in Table G-4. USACOE shall revise Appendix G to include the all applicable SWQC including that for mercury and arsenic. In addition, Table 3-3 indicates that surface water samples were analyzed for "mercury (low level)"; however this data is not included the Table G-4 in Appendix G. Appendix G shall be revised to include all data.	The second NJDEP criteria column (NJDEP FW Aquatic Chronic/Acute) is incorrect as provided, redundant and will be removed. Table G-4 will be revised with all applicable NJDEP SWQC including that for arsenic and mercury. In addition, all Appendix G tables will be revised to present all low level mercury results.
18.	Section 3.2.4 Sediment, Page 3-5 and Table 3-4 and Appendix G	Table 3-4 includes "maximum background concentrations" for only select contaminants. However, Appendix G does not reference "maximum background concentrations." As noted above, Appendix G shall be revised to include the "maximum background concentrations" for all contaminants. The SIR states sediment exceedances are found on Figure 3-4, though they are on Figure 3-3. The SIR shall be revised accordingly.	Appendix G tables will be revised to include the maximum detected background concentrations. Figures 3-3 and 3-4 will be switched to accurately present the correct data with the report sections.
19.	Section 3.2.4 Sediment, Page 3-5	The SIR should be revised to include a more detailed discussion on the mercury detected in the sediment at sample location AW-P1-SD-002 at concentration of 13.7 mg/kg.	Section 3.2.4 (results) will be revised to report the concentration of mercury detected at sediment sample location AW-P1-SD-002. Section 4.2.4 will be revised with additional discussion of this mercury detection.
20.	Table 3-4 and Appendix G	Table 3-4 indicates that sediments samples were analyzed for "mercury (low level)"; however this data is not included data table, G-3. Appendix G shall be revised to include all data.	Appendix G tables will be revised with low level mercury results that were inadvertently excluded.

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21.	Section 4.2.1 Soil, Pages 4-1 and 4-2	The SIR shall be revised to reflect that benzo(a)pyrene was detected in several samples, and include a discussion on vanadium exceedance referenced above.	Section 4.2.1 will be revised to indicate that benzo(a)pyrene was detected above USEPA RSLs in several samples. The USEPA RSL soil criteria for vanadium listed in the SRI (5.5 mg/kg) is incorrect. Based on most current direction by USEPA for soil screening, the current lowest RSL soil screening criteria for vanadium is 390. The lowest NJDEP soil criterion is 78. As such there are no vanadium exceedances at Area W.
22.	Section 4.2.2.1, Chloroform, Page 4-3	The SIR should be revised to reflect that chloroform was detected in several samples, not just AW-P1-GW-006.	The second sentence of Section 4.2.2.1 will be clarified to indicate that chloroform was detected at concentrations greater than the USEPA MCL and background concentrations at one location. Additionally, chloroform was detected above the NJDEP PQLs at two Area W sample locations.
23.	Section 4.2.2.2 Metals, Page 4-4	The SIR suggests that metals detected in Area W shallow groundwater are similar to that which was detected in upgradient residential wells along English Creek Road and therefore not site-related. The Department notes that Area W shallow groundwater was collected from a depth less than 17 ft bgs whereas no data was provided on the residential well construction. The SIR should be revised to remove the comparison of the shallow groundwater in Area W to the nearby residential wells unless residential well construction information is provided.	Section 4.2.2.2 and Table 4-1 will be revised with available well depth information for approximately half of these wells (which range from 85 – 123 feet in depth). While these wells are considerably deeper than the Area W temporary well points, they do provide some indication of local groundwater conditions.

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24.	Section 4.2.1 Surface Water, Pages 4-4 and 4-5	The SIR states,"...arsenic and mercury were detected in surface water at concentrations exceeding criteria (Table 3-3)." As referenced above, not all applicable SWQC were included in Appendix G, Table G-4 (i.e. specifically FW aquatic chronic/acute criteria). As such the Department is not certain if statement is correct. The SIR also states, "While these few exceedances are present, they are focused on location AW-P1-SW-02 which is in the swale...that would not be expected to receive overland flow from Area W." The Department disagrees with this statement as the drainage ditch likely receives flow from the access road which bypasses Area W. The Department fines that additional evaluation of overland flow into the drainage ditch from Area W is required.	Table G-4 will be revised with the correct NJDEP SWQC and accordingly Table 3-3 will be revised if necessary. The FW Aquatic Chronic/Acute criteria column is redundant and incorrect. In addition, per response to comment #10 above, an additional table presenting a complete listing of the standards used, as well as the "strictest" value used for comparison, will be added to the SIR. Figure 2-1 will be enlarged to show the drainage area for the Building 170 drainage ditch. The text will be revised to consider potential drainage from Area W to this drainage ditch although it is likely to provide a minor fraction of the overall contribution of the surrounding area. Included in the discussion will be a review of the soil and groundwater data in comparison to sediment and surface water data at location SD-002/SW-002. For example, preliminary review indicates that only bis (2-ethyhexyl) phthalate and cyanide (only two detected concentrations) were measured in soil concentrations at Area W in concentrations equal to or greater than at SD-002. In the case of bis (2-ethyhexyl) phthalate, similar soil concentrations were found in background

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25.			samples. With respect to surface water samples, arsenic was detected at elevated concentrations in Area W soil and will be discussed.
26.	Section 4.2.2 Sediment, Pages 4-5 and 4-6	As noted above, additional discussion of the mercury detected in the sediment at sample location AW-P1-SD-002 is warranted.	Per the response to comment #19, Section 4.2.4 will be revised with additional discussion of this mercury detection.
27.	Section 6.0 Conclusions, Page 6-1	The SIR references that mercury was detected in one groundwater sample above the applicable criteria but does not reference that mercury was also detected in the surface water and sediment above their applicable criteria in the adjacent drainage ditch. Whether as part of this Area W or the ongoing Area U investigation, the Department finds that additional evaluation of the drainage ditch near Building 170 is required where mercury was detected in the surface water (W-P1-SW-02) and sediment (AW-P1-SD-02) above the applicable criteria.	While elevated mercury was detected in surface water and sediment at the sampling location with the Building 170 drainage ditch, there is no indication that Area W soils or groundwater are associated with these results. As such, the results will be addressed in the Area U Supplemental Remedial Investigation. Figure 4-3, presenting additional upgradient and downgradient sediment sampling locations has been added for reference.

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Reviewer: Howard Kimpton, FAA			
1.	General	The evaluation of contaminants across media was made difficult by the lack of summary tables that presented all constituents detected in each medium (not just those constituents that exceeded comparison criteria). Summary tables indicating all constituents detected in each medium should be provided to support the evaluation of cross-media impacts.	Appendix G provides complete data summary tables presenting all constituents detected in each medium.
2.	General	The Area W Work Plan said the results of the SIR would be used to update the Conceptual Site Model (CSM). No update of the CSM was provided.	A conceptual site model revision for the site will be included in the Final report. **JULY 2012:** No revision was required for the conceptual site model.

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3.	Section 2.2 and Table 2-1 through 2-8	The Area W Work Plan called for the analysis of all aqueous and solid samples for low level mercury by Method 1631. Methyl mercury analysis (Method 1630) was to be performed on half of the surface water samples (if mercury was detected), sediments where mercury was detected, and all groundwater samples. Method 1631 for methyl mercury is not listed in Table 2-1 and methyl mercury is described as an analyte only for groundwater and only in the text (not in Table 2-3). The actual analytical methods should be clearly stated in the text and tables. If methyl mercury analysis was not performed as proposed, this should be stated and explained in Section 2.2.5 and Table 2-9.	Methyl mercury analysis was performed as proposed, however the results were erroneously excluded from the report. Inclusion of these results indicates that methyl mercury was detected at a concentration greater than the Region III BTAG fresh water ecological screening criteria, which will be discussed in the text. Methyl mercury (Method 1630 for aqueous samples and Method 1630 mod for solid samples) was performed on all sediment, surface water and groundwater samples (per the Work Plan) as mercury was detected (low level analysis) in all of sediment, surface water and groundwater samples. Tables 2-1, 2-3, 2-6, 2-8, 5-2 as well as Tables G-2, G-3, G-4, K-2 and K-3 will be revised to present the methyl mercury results. Methyl mercury methods will be added to the text of Sections 2.2.2, 2.2.3, and 2.2.4 and discussion of the results will be added to Sections 5.1.2
4.	Section 2.2 and Table 2-1 through 2-8	Based on the inclusion of methyl mercury results in Table K-2, it appears that methyl mercury analysis was performed on at least some of the surface water samples. The methyl mercury analyses and results should be discussed within the text of the SIR.	Methyl mercury methods will be described in Section 2.2 with results presented in Section 5.1.2 and Table 5-3. See response to comment #3 above.

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5.	Section 2.2	Section 3.3.3 of the Area W Work Plan described the use of "clean techniques" in the collection of samples for mercury analysis. There is no description of the use of such techniques in Section 2.2 of this report. The text should state if they were used and, if not, the deviation from the Work Plan should be addressed in Section 2.2.5 and Table 2-9.	A description of the "clean techniques" utilized will be added to Section 2.2.
6.	Section 2.2.1 and 2.2.4	The text states that soil and sediment samples were collected using disposable aluminum pans and disposable plastic trowels. New Jersey Department of Environmental Protection (NJDEP) guidance specifies the use of stainless steel sampling equipment (both trowel and pan/bowl) unless pre-approved by NJDEP (NJDEP Field Sampling Procedures Manual Chapter 6B, pages 14-15, Chapter 60, page 61). Also, the text does not indicate if this equipment was decontaminated prior to use.	USACE determined that sampling methods are appropriate for the SI. Differences from NJDEP guidance will be discussed in Section 2.2.5 of the text and Table 2-9. The field equipment blank results will be discussed in Sections 3.2.1 and 3.2.4 to report that no contaminants were detected in these equipment blanks. All non-dedicated field equipment was decontaminated prior to use as per the methodology described in Section 4.8 of the Final Work Plan.
7.	Section 2.2.1	The Area W Work Plan stated that surface soil samples would be collected using bucket augers. The deviation from the sampling equipment specified in the Work Plan should be addressed in Section 2.2.5 and Table 2-9.	Bucket augers were used for surface soil sample collection (see Section 2.2.1, 2nd paragraph, 1st sentence). We believe the confusion relates to the 2nd sentence in the paragraph will be revised to specify "subsurface" soil samples were collected utilizing macrocore sleeves per the Work Plan.
8.	Section 2.2.2	The text should clearly state that for some groundwater samples, the collection of sufficient aliquots of sample to support all of the required analyses was spread over multiple days.	Additional detail on sampling timeframe will be added to Section 2.2.2.

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9.	Section 2.2.3	Section 4.1 of the Area W Work Plan states that unfiltered samples would be collected directly from the water body while filtered samples would be pumped through a filter. Section 2.2.3 states that all samples were collected with the pump. Collecting unfiltered surface water samples with a peristaltic pump (especially samples analyzed for volatile organic compounds [VOCs]) is not in accordance with NJDEP guidance. If the samples were truly collected in this manner, the deviation from the Work Plan should be addressed in Section 2.2.5 and Table 2-9.	The text as provided is incorrect. The unfiltered surface water samples were collected directly from the water body as per the Work Plan and federal guidance. Section 2.2.3 will be revised as such.
10.	Section 2.2.5 and Table 2-9	Section 3.3.3 of the Area W Work Plan described the use of "clean techniques" in the collection of samples for mercury analysis. There is no description of the use of such techniques in Section 2.2 of this report. The text should state if they were used and, if not, the deviation from the Work Plan should be addressed in Section 2.2.5 and Table 2-9.	Section 2.2 will be revised to include a description of the “clean techniques” which were followed during Area W sampling, per the Work Plan.
11.	Section 2.4.1	The text states that soil and groundwater data were compared to the United States Environmental Protection Agency (US EPA) Regional Screening Levels (RSLs) and references the November 2010 update. Why wasn't the November 2011 update used? Would any of the conclusions be different if the current values were used?	The report was in progress before the November 2011 update was in place. As these have since been revised again, the text and tables will be updated with the May 2012 RSL reference. No changes in values between 2010 and 2012 versions. As such, the conclusions will not change.
12.	Section 2.4.1	Section 3.5 of the Area W Work Plan stated that the data would also be screened against USEPA Soil Screening Levels (USEPA/540/R-951128 and USEPA/540/R-96/018). Were the Soil Screening Levels (SSLs) used in the analysis of the soil data?	The referenced USEPA SSLs were inadvertently excluded from the analysis of the soil data. However, direction received from USEPA (per their comments on this report) was to screen soils against the current (May 2012) RSLs as they take into account the most recent science. As such soil will only be screened against applicable NJDEP and EPA soil RSL criteria.

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13.	Section 2.4.2	The Area W Work Plan included the following eco-screening benchmarks that are not referenced in the SIR: Soils: USEPA Ecological Soil Screening Levels (eco-SSLs) (http://www.epa.gov/oswer/riskassessment/ecorisk/ecossl.htm) Sediments: Talmage, et.al., 1999. Nitroaromatic Munition Compounds: Environmental Effects and Screening Values. Rev. Environ. Contam. Toxicol. 161:1-156 Describe why these benchmarks were not considered.	The referenced EPA ecological SSLs were inadvertently excluded from the analysis of the soil data. These represent the currently applicable soil ecological criteria for USEPA and will be utilized in addition to the NJDEP ecological soil screening critieria. The EPA ecological SSLs supersede the Efroymson et al and EPA Region 3 and Region 5 ecological soil benchmarks which have been removed from Section 2.4.2, Table 2-11 and Table K-1. Nitroaromatic munition compounds were not analyzed for in this investigation based on the prior results (Parsons 2007) and per the Work Plan. This reference should not have been included in the Work Plan.
14.	Section 3.2	The last sentence of the first paragraph states, in part, that " ... a list of compounds that were not detected at concentrations above applicable criteria is found in Appendix I," Please clarify this statement. Did the listed compounds have detection limits that exceeded the applicable criteria, even though they were not detected in any of the samples, or were these compounds simply not detected in any samples at concentrations that exceed the applicable criteria?	The last sentence of Section 3.2, 1st paragraph will be revised to clarify that the compounds listed in Appendix I were not detected in any sample but had detection limits that exceeded the applicable criteria.

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15.	Section 3.2	Based on a check of the data in Appendix G, it appears that the compounds listed in Appendix I had detection limits that exceeded the applicable criteria. If this is the case, explain why this occurred, as Table 3-1 of the Quality Assurance Project Plan (QAPP) evaluated detection limits for the proposed analytical methods relative to screening criteria to ensure that achievable laboratory limits would be less than the applicable criteria.	Table 3-1 of the QAPP identified a number of compounds that were expected to have detection limits that exceeded the lowest criteria. The remainder of the compounds that were measured with detection limits exceeding criteria were due to matrix issues (i.e., elevated moisture) within one or more samples that elevated detection limits. Based on the highly conservative approach of screening against the strictest available criteria, non-detection of compounds at all sample locations at these low levels does not suggest contamination.
16.	Section 3.2	The potential impact on the data analysis of the number of compounds with detection level exceedances of screening criteria should be discussed in the text.	See response to comment #15. Section 3.2 will be revised to further address the number of compounds with detection levels exceeding lowest applicable screening criteria.
17.	Section 3.2	Also see the first comment under Section 2.4.1 above.	See disposition for comment #11.
18.	Section 3.2.1	Vanadium was detected in soil samples at levels exceeding the USEPA RSL listed in Table G-I but is not discussed in the text, listed in Table 3-1, or on Figure 3-1.	The USEPA RSL soil criteria for vanadium listed in the SRI (5.5 mg/kg) is incorrect. Based on most current direction by USEPA for soil screening, the current lowest RSL soil screening criteria for vanadium is 390. The lowest NJDEP soil criterion is 78. As such there are no vanadium exceedances at Area W.

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19.	Section 3.2.1	The text references a total of twelve soil samples, when sixteen were collected. If only the non-background sample results are being discussed here, that should be stated.	The text will be revised to clarify that 'site samples' are referring to samples collected within the Area W boundaries.
20.	Section 3.2.1	The wording regarding aluminum is incorrect. First, aluminum was detected in eleven of sixteen (not six of twelve) samples at levels exceeding NJDEP standards. In the non-background samples, aluminum exceeded the maximum background level and the USEPA RSL in five of twelve samples (the text states that all concentrations were below the background level).	Section 3.2.1 will be revised to reflect this accurate description of the aluminum concentrations.
21.	Section 3.2.1	The benzo(a)pyrene and dibenzo(a,h)anthracene detections above RSLs in Table 3-1 should be shaded, as the background results were non-detects.	Table 3-1 will be revised to shade these three instances.
22.	Section 3.2.2	The use of a "-" symbol should be defined in the footnotes of Tables 3-2 and G-2.	The "-" will be defined in the footnotes of Tables 3-2 and G-2.
23.	Section 3.2.2	Low-level mercury results should be included in Table G-2.	Table G-2 will be revised to include low level mercury results.
24.	Section 3.2.2	Secondary Maximum Contaminant Levels (MCLs) are included as reference values in Table 3-2 but not in Table G-2. They should be included in Table G-2.	Table G-2 will be revised to include secondary MCLs. **JULY 2012**: EPA requested that RSLs for tapwater also be used as the screening criteria. As such, the lower value of these criteria was utilized. See Table 2-9.
25.	Section 3.2.2	The MCL for arsenic is not listed in Table G-2.	The MCL for arsenic will be added to Table G-2. **JULY 2012:** EPA requested that RSLs for tapwater also be used as the screening criteria. As such, the lower value of these criteria was utilized. Table G-2 lists the RSL for tapwater for arsenic as the criteria is lower than the MCL.

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26.	Section 3.2.2	The text should describe the difference between primary and secondary MCLs.	Section 3.2.2 will be revised to include a description of the difference between primary and secondary MCLs (See Section 4.2.2.2). **JULY 2012:** EPA requested that RSLs for tapwater also be used as the screening criteria. As such, the lower value of these criteria was utilized. Section 3.2.2 was revised to include a description of secondary MCLs (applicable to aluminum and iron in this case).
27.	Section 3.2.2	The text should discuss the detection of arsenic above MCLs, Two samples exhibited arsenic above MCLs, NJDEP Practical Quantitation Levels (PQLs), and background levels.	Section 3.2.2 will be revised to discuss the measurement of arsenic above MCLs, NJDEP PQLs and background levels. **JULY 2012:** EPA requested that RSLs for tapwater also be used as the screening criteria. The RSL for tapwater had a lower criteria for arsenic. Section 3.2.2 was revised to include the detection of arsenic above EPA RSLs for tapwater.
28.	Section 3.2.2	The text indicates that arsenic was not detected in the background samples. It was detected. A more informative statement would be to say that all of the metals listed except for mercury and cyanide were detected at higher concentrations in on-site samples than in background samples.	Section 3.2.2.3, sentence four will be revised as suggested.
29.	Section 3.2.2	The low-level dissolved mercury result for sample GW-007 in Table 3-2 should not be underlined and it should not be listed on Figure 3-2.	Table 3-2 and Figure 3-2 will be revised.

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30.	Section 3.2.2	The last sentence of the text is misleading, in that elevated levels of metals (i.e., above the comparison criteria) were measured in the other four site groundwater samples.	The text will be revised to say "… elevated levels of metals (i.e., above the comparison criteria) were measured at lower concentrations in the other four site groundwater samples….".
31.	Section 3.2.3	Low-level mercury results should be included in Table G-3.	Table G-3 will be revised to include low-level mercury results.
32.	Section 3.2.3	Figures 3-3 and 3-4 are labeled in reverse order from their references in the text (i,e., Figure 3-3 should be the surface water figure).	Figures 3-3 and 3-4 will be reversed to appropriately follow the text.
33.	Section 3.2.3	The mercury result of 0.094 listed in Table 3-3 for sample SW-002 Dissolved should be shaded.	The mercury result of 0.094 for SW-002 will be shaded.
34.	Section 3.2.3	The NJDEP criteria for dissolved arsenic in Table G-4 are incorrectly listed as No Level Established (NLE). All detections of dissolved arsenic exceed the NJDEP criteria and should be underlined in Table G-4.	The arsenic criteria will be corrected and the results will be underlined as appropriate.
35.	Section 3.2.3	The NJDEP criterion for mercury is missing from Table G-4.	The NJDEP criterion for mercury will be added to Table G-4.
36.	Section 3.2.4	The sentence in the second paragraph is not correct. Acetone was detected at five sample locations, including the two background sample locations, at levels exceeding the USEPA criterion and selenium was detected at two sample locations at levels exceeding the USEPA criterion.	The text will be revised as presented in the comment. **JULY2012:** It should be noted that per EPA comments, the sediment screening will be based on RSLs for soil. Based on the re-screening, acetone and selenium were below RSLs for soil and thus are not shown on Table 3-4.
37.	Section 3.2.4	It should be noted that cyanide was detected at a background sample location at a level exceeding the USEPA criterion.	The text will be revised to include cyanide among the compounds exceeding USEPA criteria.
38.	Section 3.2.4	The background levels listed in Table 3-4 for over ten analytes are incorrect. The values listed represent detection limits for results where the analytes were not detected. As a result, more results in the table should be shaded, as they exceed background levels.	Table 3-4 will be revised to remove non-detected background concentrations where they were previously listed as maximum background concentrations.

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39.	Section 3.2.4	The acetone detections should be bolded as exceedances of the USEPA criterion, not underlined.	Table 3-4 will be revised to bold (instead of underline) acetone detection in exccedance of USEPA criteria. **JULY 2012:** It should be noted that per EPA comments, the sediment screening will be based on RSLs for soil. Based on the re-screening, acetone was not detected at concentrations exceeding soil RSLs.
40.	Section 4.2.1	The first sentence of the last paragraph is incorrect. Benzo(a)pyrene was detected in sample locations SS-003, SS-004, SS-005 and SS-006 at levels exceeding RSLs and background concentrations.	The text will be revised as presented in the comment.
41.	Section 4.2.1	The text should discuss the potential impact of using disposable aluminum pans in the collection of the soil samples on the detection of aluminum in the soil samples. Similarly, the potential impact of using disposable plastic trowels on the detection of semi-volatile organic compounds (SVOCs) in the samples should be discussed.	Commented noted. We acknowledge that there could be a correlation based on the aluminum and SVOC detections in soil samples. However, results from the equipment blanks from this equipment did not detect any compounds. Furthermore, elevated aluminum and the noted SVOCs are within documented regional background concentrations as discussed in the text. Section 4.2.1 will be revised to address this issue. See disposition for comment #6.

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42.	Section 4.2.1	The text should discuss the detection of vanadium in twelve of the samples above USEPA RSLs.	The USEPA RSL soil criteria for vanadium listed in the SRI (5.5 mg/kg) is incorrect. Based on most current direction by USEPA for soil screening, the current lowest RSL soil screening criteria for vanadium is 390. The lowest NJDEP soil criterion is 78. As such there are no vanadium exceedances at Area W.
43.	Section 4.2.2	The reference to four compounds in soil above criteria should be changed to five to reflect the vanadium contamination.	The text will be revised as presented. **JULY 2012:** Per the response to comment #42, there is no vanadium exceedance and hence the text is correct.
44.	Section 4.2.2.1	The text should be corrected. It states that chloroform was only detected at a concentration of 3.3 micrograms per Liter *(ug/L).* While this is the only detection that exceeded criteria, chloroform was detected in other groundwater samples from Area W.	The text will be revised to indicate that chloroform was only detected at a concentration above the maximum background concentrations (2.5 ug/L) at one location (AW-P1-GW-006).
45.	Section 4.2.2.1	The Class IIA Ground Water Quality Standard should not be referenced, as it is not applicable to the Technical Center.	The NJDEP PQLs are the criteria to which groundwater is appropriately screened against. The Class IIA GWQS was provided in addition to the PQL to provide a relative concentration of reference.
46.	Section 4.2.2.1	The typical depths of residential wells along English Creek Road should be noted.	The range of known well depths was added to Section 4.2.2.
47.	Section 4.2.2.1	Table 4-1 lists results for two sample locations not shown on Figure 4-1 (2310 and 2331). These locations should be identified or the results removed from the table.	Table 4-1 has been revised to remove the results from these locations (2310 and 2331).

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48.	Section 4.2.2.2	The text should discuss the presence of arsenic at levels exceeding the USEPA MCLs.	The text will be revised to include a discussion of arsenic at levels exceeding the lower of EPA MCLs or EPA RSLs for tapwater.
49.	Section 4.2.2.2	The second sentence on page 4-4 is not clear.	The sentence will be simplified to state that there are no exceedances of the EPA RSLs for tapwater or MCLs for lead at the four wells to the north (downgradient) of AW-P1-GW-005.
50.	Section 4.2.2.2	The statement that "the elevated concentrations of these four metals were all measured" at GW-004 and GW-005 is not true. While the highest concentrations of these metals were measured in these wells, other wells also exhibited chromium and iron above the comparison criteria. The exceedances of the criteria in the other wells should also be discussed.	The text will be revised to state that "…the highest concentrations of these metals were measured in these wells…". In addition, the exceedances of the criteria in the other wells will also be addressed.
51.	Section 4.2.1 (Surface Water)	The numbering for this section and the following section needs to be corrected.	The section numbering will be fixed.
52.	Section 4.2.1 (Surface Water)	The last sentence on page 4-4 (continuing onto page 4-5) is poorly written and should be reworded to more clearly state its intent.	The sentence will be clarified to indicate that the majority of the sediment exceedances were detected at AW-P1-SW-002.

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53.	Section 4.2.1 (Surface Water)	The text states that location SW-002 would not be expected to receive flow from Area W. Topographic contours presented on Figure 2-1, however, indicate that drainage along the southwestern edge of the Building 170 access road would discharge to the Building 170 drainage ditch upstream of sample location SW-002. Address the potential discharge of contaminants, including mercury, associated with Area W to this point upgradient of SW-002 (this comment also applies to the sediment data interpretation in Section 4.2.2).	Figure 2-1 will be enlarged to show the drainage area for the Building 170 drainage ditch. The text will be revised to consider potential drainage from Area W to this drainage ditch although it is likely to provide a minor fraction of the overall contribution of the surrounding area. Included in the discussion will be a review of the soil and groundwater data in comparison to sediment and surface water data at location SD-002/SW-002. For example, preliminary review indicates that only bis (2-ethyhexyl) phthalate and cyanide (only two detected concentrations) were measured in soil concentrations at Area W in concentrations equal to or greater than at SD-002. In the case of bis (2-ethyhexyl) phthalate, similar soil concentrations were found in background samples. With respect to surface water samples, arsenic was detected at elevated concentrations in Area W soil and will be discussed.
54.	Section 4.2.2 (Sediment)	The first sentence is not true. While organic compounds detected at concentrations exceeding criteria in Area W groundwater were not detected in sediment above criteria, inorganic analytes (e.g., copper and mercury) that exceeded criteria in Area W groundwater were also detected in sediments above screening criteria.	Section 4.2.4 will be revised to discuss the organic and inorganic compounds detected at concentrations above criteria in the context of the soil and groundwater exceedances.

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55.	Section 4.2.2 (Sediment)	The second paragraph should be checked for accuracy as well. One additional SVOC was detected above NJDEP standards at SD-002 (none at SD-001). There was also an exceedance of NJDEP SVOC standards at SD-003 but the level was below the background level.	The second paragraph of Section 4.2.4 was revised to more accurately describe sediment exceedances of USEPA and NJDEP criteria.
56.	Section 5.1.1	The text must be revised to reflect that RSL exceedances for benzo(a)pyrene were not limited to one location.	The text will be revised to reflect the four locations benzo(a)pyrene was exceeding RSLs (as the maximum background concentration listed was not detected).
57.	Section 5.1.1	What exposure scenario and toxicity information is the estimated cancer risk based on? More detail must be provided to describe how the risk value was estimated.	The exposure scenario and toxicity information is provided in the referenced RSLs for soil samples as described.
58.	Section 5.1.1	The text must be revised to reflect that there were five inorganic compounds detected in groundwater at levels exceeding MCLs (arsenic is missing from the listed constituents). A discussion of arsenic relative to potential human health concerns must be provided.	The text will be revised with respect to arsenic. Further discussion of arsenic relative to human health concerns will be provided.
59.	Section 5.1.1	The Screening Level Human Health Risk Assessment should also address the other media sampled (surface water and sediment) and why these media are or are not of potential concern with respect to potential human health risks. While surface water and sediment were not sampled on site, the potential for migration of soil via runoff or discharges of groundwater from Area W to impact surface water and sediment should be discussed. See previous comment about contaminants that were detected in both groundwater and sediment. Arsenic was also detected in soil, surface water and sediment.	See additional comments and responses following this set.
60.	Section 5.1.2	The text focuses on transport of soil contaminants to surface water and sediment. As shown in Figure 3-2 of the Area W Work Plan, on-site groundwater also the potential to discharge to off-site surface water and sediment; therefore, this potential migration pathway and its potential impacts on surface water and sediment data must be addressed within the Screening Level Ecological Risk Assessment (SLERRA).	See additional comments and responses following this set.

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61.	Section 5.1.2	Summary tables should be provided that identify analytical results that exceed ecological screening levels in all media, not just soils.	Tables 5.2 and 5.3 presenting exceedances of ecological screening levels for surface water and sediment (respectively) will be added. Groundwater is not an appropriate media to screen for ecological concerns.
62.	Section 5.1.2	Appendix K, Table K-1 identifies exceedances of mercury eco-screening levels for total mercury results. The low-level mercury results should also be shaded where they exceed the mercury eco-screening levels. If this correction is made, every sample exceeds mercury eco-screening levels.	The previously identified lowest ecological criterion for mercury (0.00051 mg/kg) was based on a woodcock study. As woodcock are not known to be present at Area W, the more applicable lowest ecological criteria of 0.1 mg/kg (based on soil invertebrate exposure and also a listed NJDEP wildlife PRG) was utilized.
63.	Section 5.1.2	The text and Table 5-1 must be revised to reflect the presence of mercury at levels exceeding eco-screening levels.	See disposition of comment #62.
64.	Section 5.1.2	When evaluating constituents that exceed eco-screening levels in sediments and surface water, the SLERA only considers those constituents that also exceed eco-screening levels in soils as possibly being attributable to the site. All constituents detected in on-site soils should be considered as possible sources to off-site sediment and surface water contamination, as those constituents that might present ecological risks to terrestrial receptors are not necessarily the same as the constituents that might present risks to aquatic receptors. The majority of the constituents detected in sediments and surface water above eco-screening levels were also detected in on-site soils and could potentially be attributable to the site. Similarly, constituents detected in groundwater could also be sources of contamination in sediments and surface water, and should be considered.	See additional comments and responses following this set.
65.	Section 5.1.2	The source of the statement "aluminum is considered a naturally occurring metal in soil and wetland sediments" should be provided.	The statement will be removed.

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Comments Prepared by: Federal Aviation Administration Responses Prepared by: USACE/Weston

No.	Ref. Page / Para.	COMMENTS	Disposition
66.	Section 5.2.1	The SLERA should discuss potential environmental receptors and contaminant fate and transport mechanisms for those constituents that exceed eco-screening levels.	Section 5.1.2 will be revised to include a discussion of potential environmental receptors and contaminant fate and transport mechanisms for those compounds (metals) that exceed eco-screening levels as related to Area W.
67.	Section 5.2.1	Table K-1 - Soil benchmarks include USEPA Region 3 Biological Technical Assistance Group (BTAG) screening levels. However, surface soil screening values from this source are unavailable as only surface water and sediment USEPA Region 3 BTAG screening values are available.	These older USEPA Region 3 BTAG soil screening values appear to be no longer recognized and will be replaced with the current USEPA Ecological SSLs for soils (see Table 2-11).
68.	Section 5.2.1	Table K-1 - USEPA ecological soil screening levels (eco-SSLs) should also be listed as a source for selection of ecological screening values. This source was referenced in the final work plan for Area W. Lower screening values need to be presented in this table for 4,4-00T (and its derivatives), dieldrin, pentachlorophenol, high molecular weight polycyclic aromatic hydrocarbons (HMW PAHs), antimony, lead, manganese and selenium based on the applicable eco-SSLs.	Table K-1 will be revised with appropriate Eco SSLs.
69.	Section 5.2.1	Table K-2 - Screening values for hardness-dependent metals should be adjusted based on the mean water hardness of the surface water body sampled. Calcium and magnesium concentrations can be used to determine the water hardness if this parameter was not directly analyzed for by the laboratory.	Screening values for the hardness-dependent metals will be adjusted based on the mean water hardness of the SBAC surface water samples.
70.	Section 5.2.1	Table K-2 - USEPA Region 3 values should incorporate the latest revised surface water benchmarks (July 2006). This reference would provide additional surface water screening values for many compounds and metals currently lacking a screening value. Alternatively, NJDEP fresh water (chronic) screening criteria (NJDEP, 2009) can be used to derive surface water benchmarks.	The latest revised surface water benchmarks (July 2006) will be incorporated.
71.	Section 5.2.1	Table K-3 - USEPA Region 3 values should incorporate the latest revised sediment benchmarks (August 20(6). This reference would provide additional sediment screening values for many compounds currently lacking a screening value. Alternatively, NJDEP fresh water (lowest effect levels) screening criteria (NJDEP, 2009) can be used to derive sediment benchmarks.	The latest revised sediment benchmarks (August 2006) will be incorporated.

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TECHNICAL REVIEW COMMENTS

Project Name: Atlantic City Naval Air Station FUDS CO2NJ0977-02
Location: Egg Harbor Township, NJ
Document Name: Draft Final Site Investigation Report, Area W Site Investigation (December 2011)
Date: May 2012
Comments Prepared by: Federal Aviation Administration Responses Prepared by: USACE/Weston

No.	Ref. Page / Para.	COMMENTS	Disposition	Additional FAA Comments	Disposition
Reviewer: Howard Kimpton, FAA					
1.	General	The evaluation of contaminants across media was made difficult by the lack of summary tables that presented all constituents detected in each medium (not just those constituents that exceeded comparison criteria). Summary tables indicating all constituents detected in each medium should be provided to support the evaluation of cross-media impacts.	Appendix G provides complete data summary tables presenting all constituents detected in each medium.	Appendix G provides ALL data. Summary tables just showing detected values would assist in data evaluation.	We can provide Appendix G on CD in MS Excel format if that would assist in your data evaluation.

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59	Section 5.1.1	The Screening Level Human Health Risk Assessment should also address the other media sampled (surface water and sediment) and why these media are or are not of potential concern with respect to potential human health risks. While surface water and sediment were not sampled on site, the potential for migration of soil via runoff or discharges of groundwater from Area W to impact surface water and sediment should be discussed. See previous comment about contaminants that were detected in both groundwater and sediment. Arsenic was also detected in soil, surface water and sediment.	See response to comment #54. Additional discussion of arsenic concentrations detected in Area W soils will be provided relative to the concentrations in the Building 170 drainage ditch. Otherwise there is little if any indication of potential of surface water or sediment contamination from Area W soils or groundwater.	If there is sufficient justification to not evaluate potential human health risks, the reasoning for not looking at such risks should be presented.	The SLHHRA will be revised to include and evaluation of sediment and surface water following USEPA direction to screen sediment against RSLs for residential/industrial soils and the lower of USEPA MCLs and RSLs for tapwater, respectively. As a note, the surface water screening already included the NJDEP criteria for protection of human health. Sections 5.1.1.3 and 5.1.1.4, along with Tables 3-3 and 3-4, and Figures 3-3 and 3-4 will be revised as such.

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60	Section 5.1.2	The text focuses on transport of soil contaminants to surface water and sediment. As shown in Figure 3-2 of the Area W Work Plan, on-site groundwater also the potential to discharge to off-site surface water and sediment; therefore, this potential migration pathway and its potential impacts on surface water and sediment data must be addressed within the Screening Level Ecological Risk Assessment (SLERRA).	The text (Sections 4.2.3 and 4.2.4) will be revised to discuss the sediment and surface water results at location SW/SD-003 in relation to the Area W groundwater results. It should be noted that only bis(2-ethylhexyl)phthalate was detected above background concentrations in surface water at this location (downgradient of potential Area W groundwater) and this compound was not detected above screening criteria in site groundwater samples.	SW/SD-002 could also be impacted by drainage from Area W (as discussed in the FAA's original comment #53) and should be considered.	Location SW/SD-002 will also be considered in the review of potential migration of contaminants from Area W. Specifically, the Area W soil and groundwater data was compared to the exceedances of sediment data at locations SD-002 and SD-003. Of the compounds exceeding criteria in Area W soils and groundwater, arsenic, chromium, and mercury were detected above screening criteria at sediment sample SD-002 (none at location SD-003). It should be noted, however, that the elevated chromium and mercury concentrations were only measured in the two groundwater samples that had elevated turbidity. With respect to arsenic,

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					measured concentrations of arsenic in soil are below documented regional background concentrations (BEM Systems, 1998 and 2002).

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64	Section 5.1.2	When evaluating constituents that exceed eco-screening levels in sediments and surface water, the SLERA only considers those constituents that also exceed eco-screening levels in soils as possibly being attributable to the site. All constituents detected in on-site soils should be considered as possible sources to off-site sediment and surface water contamination, as those constituents that might present ecological risks to terrestrial receptors are not necessarily the same as the constituents that might present risks to aquatic receptors. The majority of the constituents detected in sediments and surface water above eco-screening levels were also detected in on-site soils and could potentially be attributable to the site.	There is no indication of contaminant migration from Area W to downgradient sediment and surface water. All soil sample results for those compounds exceeding ecological criteria in sediment were compared to the measured sediment concentrations. Only two compounds were higher in soil than in sediment. Bis (2-ethyhexyl) phthalate (0.24 mg/kg in soil vs. 0.22 mg/kg in sediment) and cyanide (0.23 mg/kg in soil vs. 0.1 mg/kg in sediment). See disposition of comment #60.	This evaluation should be documented in the report. See response to comment #60.	The evaluation presented in the original disposition will be included in the Final Area W SI Report. See disposition to comment #60.

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		Similarly, constituents detected in groundwater could also be sources of contamination in sediments and surface water, and should be considered.			